

MEMORANDUM

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DATE: March 27, 2014

SUBJECT: Operational Position Statement for March 25-31, 2014

The U.S. Army Corps of Engineers (USACE) is responsible for managing Lake Okeechobee water levels and makes operational decisions about whether to retain water or release water based on their regulation schedule release guidance (2008 LORS). The USACE makes this decision taking into account the best available science and data provided by its staff and a variety of partners, which includes the South Florida Water Management District (SFWMD).

The SFWMD team has discussed the system wide environmental conditions, the water supply conditions, and has evaluated the overall status of the water management system. Detailed reports are available at the SFWMD's Operational Planning internet page.

Recommendation to the USACE

For the period of March 25-31, 2014, the SFWMD recommends the USACE continue to follow the 2008 LORS release guidance to manage the Lake stage. The Lake stage receded about 0.09 feet during the past week to a March 17 stage of 13.59 feet, NGVD. The stage remains in the Low Subband about 0.1 feet above the Baseflow Subband.

2008 LORS Release Guidance (Part C): The March 24th outcome from Part C of the 2008 LORS suggests "Up to Maximum Practicable to WCAs IF desirable or with minimum Everglades Impacts". The Tributary Hydrologic Condition (THC) remains in the normal classification this week. The THC is determined by the wetter of the Palmer Index and the Lake O Net Inflow. The Palmer Index remains in the normal class (2008 LORS classifications); and the Lake O Net Inflow remains in the dry class this week.

The USACE continues to advise the SFWMD to discharge water south from Lake Okeechobee per Part C of the LORS release guidance so long as the STAs are not adversely affected. Rainfall during the past week and associated EAA runoff temporarily suspended Lake regulatory releases to the WCAs via the STAs. Lake O regulatory discharges to WCA-2A via STA-2 resumed March 26th. Lake O regulatory discharges to WCA-3A via STA-3/4 resumed March 27th. Input from SFWMD everglades' scientists indicate regulatory releases to northwestern WCA-3A provide some benefit to northwestern WCA-3A, and the flows are not large enough to adversely impact central and southern WCA-3A stages. Scientists also recommend continuation of the good recession rates in WCA-2A and WCA-3A. Water supply releases from WCA-2A will continue as needed via S-38.

2008 LORS Release Guidance (Part D): The outcome from Part D of the 2008 LORS release guidance is the same as last week: "S-79 up to 3000 cfs; and S-80 up to 1170 cfs". The stage remains in the Low-Subband and is forecast to reach the Baseflow Subband within two weeks. The Tributary Hydrologic Condition remains within the normal classification this week and the release guidance outcome is the same as last week. The release guidance continues to suggest releases up to the typical Low-Subband rates.

For the St. Lucie Estuary, SFWMD estuary scientists reported that local sources (runoff and ground water) are currently keeping salinities within the preferred range. Releases of freshwater from Lake Okeechobee are not recommended. Releases averaging more than 200 cfs at S-80 would lower salinity and adversely impact oysters inhabiting the South Fork of the estuary.

For the Caloosahatchee Estuary, SFWMD estuary scientists reported salinity conditions are within the preferred ranges for tape grass in the upper estuary and for oysters in the lower estuary. Forecast salinity near the I-75 Bridge will increase without releases at S-79, however no freshwater inputs at S-79 are needed to keep the 30-day moving average salinity below 5 psu for the next two weeks. Recognizing the 2008 LORS guidance suggests up to 3000 cfs at S-79 and the USACE desires to discharge excess Lake O water (i.e., regulatory releases) per the 2008 LORS, SFWMD scientists suggest releases averaging no higher than 1,200 cfs at S-79. Releases averaging more than 1,200 cfs would lower salinity at Cape Coral to near the lower limit of the acceptable range for oysters. To mitigate potential stratification and phytoplankton accumulation in the water column, the release from S-79 should be conducted using the suggested pulse schedules below.

10-day pulse					7-day pulse				
Day	450 cfs	650 cfs	1000 cfs	1200 cfs	Day	450 cfs	650 cfs	1000 cfs	1200 cfs
1	1100	1300	1600	1800	1	1000	1450	1500	1700
2	1600	1900	2200	2400	2	1200	1700	1900	2100
3	850	1300	1800	2000	3	600	900	1600	1800
4	500	900	1400	1600	4	350	500	900	1400
5	350	700	1100	1300	5	0	0	700	1100
6	100	400	800	1000	6	0	0	400	900
7	0	0	600	800	7	0	0	0	600
8	0	0	300	500					200
9	0	0	200	400					
10	0	0	0	200					

Weather and Climate

Rainfall during the past week totaled 0.84 inches district wide (through 7 a.m. March 25th). Approximately 1.14 inches fell directly over Lake Okeechobee during the past 7-days. District-wide rainfall during the past 30 days totaled 2.05 inches (70% of average). The Upper and Lower Kissimmee Basins averaged about 0.4 inches of rainfall during the past week. For the past 30 days the Upper Basin received about 67% of average rainfall, while the lower basin received about 65% of average rainfall.

The SFWMD weather forecast for the upcoming week is for below-average rainfall. For week two, the forecast is also for below-average rainfall. The available (20-Feb) Climate Prediction Center (CPC) outlook for April indicates equal chances of below-normal, normal and above-normal rainfall for central and southern Florida. The available (20-Mar) CPC outlook for all the three-month windows through the dry season and the upcoming wet season also indicate equal chances of below-normal, normal and above-normal rainfall for central and southern Florida.

Current Conditions and Operations

The March 24, 2014 Lake Okeechobee stage (reported by the USACE on March 25th) was 13.59 feet NGVD, 0.09 feet lower than last week. The Lake stage is 0.39 feet lower than a month ago and is about 0.36 feet lower than one year ago. The March 25th stage was about 0.76 feet below the historical average for this date. The stage is within the Low Subband of the 2008 Lake Okeechobee Regulation Schedule (2008 LORS) and is receding toward the Baseflow Subband. Projections indicate the stage could fall into the Baseflow Sub-band within two weeks.

Daily release rates at the Lake structures, averaged for the week ending March 18th, were about 913 cfs at S-77 and 0 cfs at S-308. At the tidal structures, average daily discharges were about 1258 cfs at S-79 and 0 cfs at S-80. Lake releases at S-77 supplement C-43 basin runoff as needed to achieve the 2008LORS target discharge rate, which is a regulatory discharge and not an environmental water supply release. Average rates during the past 7-days may differ from the 10-day target mainly because the target pulse has a variable pattern over the 10-day period.

The WCA-1 stage experienced a slight reversal from last week's rainfall and the stage is currently slightly above its regulation schedule. WCA-2A marsh stage is receding and is about 0.9 feet above its regulation schedule. The S-11B headwater stage is near regulation schedule. The WCA-3A regulation stage (3 gage average) is slightly below the bottom of Zone E1 and receding at about the same rate as the regulation schedule. SFWMD everglades' scientists recommend continued recessions and no reversals in WCA stages. The S-10's remain closed, S-11C remains open and discharging less than 200 cfs; and S-12D remains open discharging less than 300 cfs. S-333 discharges will be

reduced again this week. Releases from WCA-3A continue to be reduced toward the target flows per the WCA-3A rainfall-based management plan and the E RTP. S-334 remains closed. Siphoning via S-331 continues to pass seepage from L-31N to the lower reaches of the SDCS. The S-332B, C & D pumps are being used as needed to manage water levels within the operating ranges.

SFWMD Lake Okeechobee Adaptive Protocol (AP) Release Guidance

This week the SFWMD's Lake Okeechobee Adaptive Protocol (AP) release guidance flowchart is not applicable since the Lake Okeechobee stage is above the Baseflow Subband. Recent projections indicate the lake stage could recede into the Baseflow Subband within the next 3-4 weeks if dry conditions persist and the current recession rate increases slightly. The same outlook has been forecast since December, but stages continue to recede parallel with the top of the Baseflow Subband.

Please note that the AP document included recommendations to conserve water in the beginning of the dry season when the Lake stage is in the Low Subband to ensure availability for later in the dry season when all water demands tend to be at their highest. Specific language on page 12 is shown here for convenience: "One of the fundamental tenets of adaptive protocols for Lake Okeechobee operations is to limit the 2008 LORS Low subband maximum release rate during the early part of the dry season to help conserve water and increase its potential availability for later in the dry season when the demand is largest. To implement this precept, when the lake stage is within the Low subband in the early part of the dry season, the weekly operations guidance may recommend to the USACE to limit the release volumes to no more than 50 percent of the maximum allowable. Factors that may influence this recommendation include lake stage trend, and weather and water condition forecasts."

The AP release guidance flowchart was designed primarily to guide release recommendations for circumstances when the Lake stage is within the Baseflow Subband or lower. The USACE's Water Control Plan (WCP) for Lake Okeechobee and the EAA recognizes that the SFWMD may allocate water to the environment through its "Adaptive Protocols" or other SFWMD authorities. The WCP provides guidance as to releases, including Adaptive Protocol recommendations, in the various Lake schedule subbands.

There are two primary branches of the AP release guidance flowchart. The upper branch pertains to the 2008 LORS baseflow (aka, regulatory) releases while the lower branch pertains to environmental water supply releases. It is important to recognize that the AP was developed primarily to guide the water supply balance between Caloosahatchee Estuary, permitted water users, other water supply purposes of the water control system, and the Lake O MFL Rule. The water supply balance achieved by following the AP release guidance was evaluated by the Water Resources Advisory Commission and the SFWMD Governing Board, leading to board acceptance in September, 2010. Final Adaptive Protocols for Lake Okeechobee Operations (September 16, 2010).

For additional information pertaining to operations history and past recommendations, refer to the archives of LORS-2008 Release Guidance outcomes and operational position statements at www.sfwmd.gov under the Operational Planning topic.